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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/673,271

11/28/2000

Ernst Eberlein

40999

3541

7590

04/05/2005

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EXAMINER

BAYARD, EMMANUEL

ART UNIT

PAPER NUMBER

2631

DATE MAILED: 04/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. **09/673,271**

Applicant(s)

EBERLEIN ET AL.

Examiner

Emmanuel Bayard

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 47-92 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 47-54 and 70-77 is/are rejected.
- 7) ☒ Claim(s) 55-69 and 78-92 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

This is in response to RCE filed on 1/14/05 in which claims 47-92 are pending.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 47-54, 70-77 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 47 recites the limitation "the envelope of the amplitude modulated" in line 5. There is insufficient antecedent basis for this limitation in the claim.
4. Claim 47 recites the limitation "the reference pattern" in line 6. There is insufficient antecedent basis for this limitation in the claim.
5. Claim 50 recites the limitation "the envelope of the amplitude modulated" in line 12. There is insufficient antecedent basis for this limitation in the claim.
6. Claim 50 recites the limitation "the reference pattern" in line 13. There is insufficient antecedent basis for this limitation in the claim.
7. Claim 54 recites the limitation "the multi-carrier signal" in line 3. There is insufficient antecedent basis for this limitation in the claim.
8. Claim 70 recites the limitation "the envelope of the amplitude" in line 6. There is insufficient antecedent basis for this limitation in the claim.
9. Claim 70 recites the limitation "the reference pattern" in lines 7-8. There is insufficient antecedent basis for this limitation in the claim.

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10. Claim 73 recites the limitation "the envelope of the amplitude" in line 13.

There is insufficient antecedent basis for this limitation in the claim.

11. Claim 73 recites the limitation "the reference pattern" in lines 13-14.

There is insufficient antecedent basis for this limitation in the claim.

12. Claim 75 recites the limitation "said means for generating said reference symbol" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

13. Claim 76 recites the limitation "said means for generating said reference symbol" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

14. Claim 77 recites the limitation "the multi-carrier" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 74 is likewise rejected because it depends on a base rejected claim.

Claim Objections

15. Claim 55 is objected to because of the following informalities: in page 5, line 1 of the response, replace "the" before signal with --a--. Appropriate correction is required.

16. Claim 61 is objected to because of the following informalities: in line 13, replace "the" before signal with --a--. Appropriate correction is required.

17. Claim 78 is objected to because of the following informalities: in line 10, delete "the" before time. Appropriate correction is required.

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18. Claim 78 is objected to because of the following informalities: in line 13, replace "the" before signal with --a--. Appropriate correction is required.

19. Claim 84 objected to because of the following informalities: In page 13, line 3, replace "the" before signal with --a--. Appropriate correction is required.

Claims 79-83 and 85-92 are likewise objected because they depend on a base objected claim.

Allowable Subject Matter

20. Claims 47, 50, 70 and 73 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

21. Claims 48-49, 51-54, 71-72 and 75-77 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

22. Claims 55-69, 78-92 would be allowable if rewritten or amended to overcome the above objection.

23. The following is a statement of reasons for the indication of allowable subject matter: the prior arts of record fail to anticipate or render obvious the following recited features: inserting, in time domain, the reference symbol wherein said reference symbol comprises a real part and an imaginary part which are being equal and formed by said amplitude modulated bit sequence as recited in all independent claims.

Conclusion

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Scheirer et al U.S. patent No 6,363,175 B1 teaches a spectral encoding of information.

Philips U.S. patent No 5,550,812 teaches a system for broadcasting and receiving digital data.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is 571 272 3016. The examiner can normally be reached on Monday-Friday (7:Am-4:30PM) Alternate Friday off.

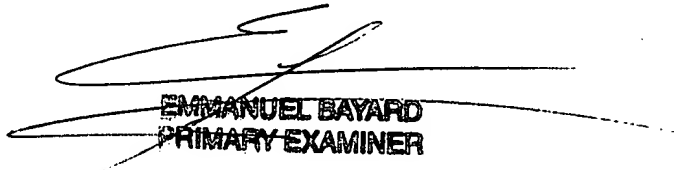
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammed Ghayour can be reached on 571 272 3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Emmanuel Bayard
Primary Examiner
Art Unit 2631

4/1/05



EMMANUEL BAYARD
PRIMARY EXAMINER